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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,356	01/21/2000	HIDEKI KIRINO	HYAE:093	6645

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PARKHURST & WENDEL
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SUITE 210
ALEXANDRIA, VA 22314-2805

EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT PAPER NUMBER

2685

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.
09/423,356

Applicant(s)
Hideki et al.

Examiner
Naghmeh Mehrpour

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2685



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 13**, are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al. (US Patent Number 5,794,116).

Regarding **Claims 1, 13**, Matsuda teaches a transmission apparatus comprising: a master station 19 transmitting video or audio by utilizing a minute-power wave; a slave station 17 transmitting video by utilizing a minute-power wave; and a relay station 11, 13, 14, placed between the master station and the slave station which are placed apart from each other by a distance longer than the reachable range of the minute-power wave; wherein a transmission signal from the master station includes, in addition to original information such as video, information indicating the address of the slave station (col 7 lines 44-48, col), and information indicating a frequency at which the

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self-station receives a signal from the relay station; said relay station modulates the frequency of the minute-power wave received from the master station to a different frequency and outputs it (col 8 lines 47-53, col 11 lines 40-50), the relay station 11, 14, transmits information about a frequency at which the self-station receives a signal from the slave station 17; and when the slave station 17 recognizes that the transmission signal is a signal directed to the self-station, it modulates the minute-power wave (frequency) to the frequency specified by the relay station 11, 13, 14, and transmits the video (col 8 lines 38-45), thereby establishing a transmission path between the master station and the slave station (col 8 lines 65-67. Col 9 lines 1-5, col 12 lines 5-9).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2-12, 14-24**, are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matsuda et al.(US Patent 5,794,116) in view of Oguro et al. (US Patent Number 6,282,366 B1)

Regarding **Claims 2, 7, 14, 19**, Matsuda teaches a transmission apparatus wherein: a transmission signal in the forward path (col 10 lines 3-6) from the master station 19 to the slave station 17.

Matsuda fails to teach that a PCM audio signal and the information indicating the address of the slave station and the reception frequency specified by the self-station are superposed on a audio

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signal during the vertical blanking period of the video signal. However Oguro teaches a method of recording of digital audio and video that a PCM audio signal (col 18 lines 39-43) and the information indicating the address of the slave station and the reception frequency specified by the self-station are superposed on a video signal during the vertical blanking period of the video signal (col 3 lines 25-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combined Oguro system that superposing audio signals to a vertical blanking period of the video signal with Matsuda wireless video system, in order to improve the performance of plurality of wireless video terminals.

Regarding **Claims 3**, Matsuda teaches a wireless visual communication system with available frequency detection means for detecting frequencies which can be used for video transmission (col 10 lines 34-37), within the reception band of the RF tuner, in advance of use; detected frequency registration means for registering the detected frequencies, as a communication frequency list (col 10 lines 32-37, col 10 lines 58-67), in both of the transmitter and the receiver; and spread spectrum communication means for spreading the power spectrum by changing the frequency within the range of the communication frequency list, and performing spread spectrum communication (See figure 2, col 9 lines 1-10). Matsuda fails to teach that a transmission apparatus comprising: a transmitter having an RF converter which generates a standard television signal; a receiver having an RF tuner which receives the standard television signal. However Oguro teaches that a transmitter having an RF converter which generates a standard television signal; a receiver having an RF tuner which receives the standard television signal(See figures 27,

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40, col 16 lines 16-36, col 18 lines 39-45). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combined Oguro system that having converter with a standard TV signal, and RF tuner that receives the TV signals with Matsuda system which changing frequency within the range of frequency list, in order to improve the performance of the wireless video system.

Regarding **Claims 4, 15-16**, Matsuda does not specifically mention that transmission power control means for automatically changing the transmission power during the communication in accordance with the use frequency band width so as to keep the power density per unit band width constant. However since Matsuda's system changing frequency within a frequency rang of the list, and the system operates within the range of frequency band. Due to the movement of the wireless video terminal, when the frequency does not match with the receive frequency the system via package 31 adjust it receives frequency. Therefore the transmission power should adjust automatically during the communication (col 10 lines 48-67). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use above teaching, in order to provide a wireless video system which performance with no interference.

Regarding **Claims 5, 17**, Matsuda does not mention that a transmission apparatus further comprising frequency changing mean; for changing the frequency during the communication, in synchronization with the synchronous timing of the video signal. However Matsuda teaches a system that changing the frequency and operate accurately. Oguro teaches frequency changing mean; for changing the frequency during the communication, in synchronization with the

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synchronous timing of the video signal (See figure 40, col 16 lines 16-36). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combined Oguro teaches in synchronization system that changing the frequency during the communication, with Matsuda wireless video system that teaches changing frequency, in order to provide video wireless system which communicate clearly and synchronous in time.

Regarding **Claims 6, 18**, Matsuda teaches a transmission apparatus as described further comprising control signal superposition and transmission means for transmitting a control signal by superposing it on the video signal in the blanking period, during the communication. Matsuda fails to teach that a transmission apparatus as described further comprising control signal superposition and transmission means for transmitting a control signal by superposing it on the video signal in the blanking period, during the communication. However Oguro teaches a method of transmitting a control signal by superposing it on the video signal in the blanking period, during the communication (col 3 lines 25-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combined Oguro system that superposing audio signals to a vertical blanking period of the video signal with Matsuda wireless video system, in order to reduce the interference in a communication system with plurality of wireless video terminals.

Regarding **Claims 8, 11, 20**, Matsuda teaches a transmission apparatus comprising: first and second transmission/reception apparatuses each comprising a transmission apparatus wherein frequency changing order control means for controlling the frequency changing order, during the

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communication, in such a manner that the frequency is changed in one direction, from the higher frequency to the lower frequency or from the lower frequency to the higher frequency, within the range of the communication frequency list, and when the frequency reaches the end of the frequency list, it is returned to the beginning of the frequency list (col 8 lines 29-53); and communication control means for controlling the first and second transmission/reception apparatuses to realize duplex communication, by using a frequency time table in which the first and second transmission/reception apparatuses always use different frequencies (col 9 lines 65-67, col 10 lines 1-10).

Regarding **Claims 9, 21**, Matsuda teaches a transmission apparatus further comprising communication frequency list update means which uses the previously registered communication frequency list when starting the communication, and uses a second communication frequency list obtained by duplicating the registered communication frequency list after the communication has been started, and updates the second communication frequency list as desired by exchanging the result of communication, i.e., whether it is good or bad, between the first and second transmission/reception apparatuses (col 10 lines 57-67).

Regarding **Claims 10, 22**, Matsuda teaches transmission apparatus further comprising: ID storage means for storing an identification number which is given to the transmission apparatus during manufacture; and ID inquiry and registration means for performing mutual inquiry of IDs with another transmission apparatus which is permitted to have communication in advance of use, and registering the ID (Col 9 lines 27-46).

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Regarding **Claims 11, 23**, Matsuda teaches a transmission apparatus further comprising: frequency setting means which always executes the reception mode in advance of the transmission mode to detect the frequency time tables of all other transmission apparatuses which are performing transmission within the game wave area, and performs transmission by using a frequency time table the use frequency of which is always different from those of these other transmission apparatuses (col 8 lines 29-47); and retransmission means for performing retransmission by using a frequency time table different from said frequency time table when a transmission signal from another apparatus which has requested communication cannot be detected even when a predetermined period of time has passed after starting the transmission mode (col 7 lines 34-62). Matsuda does not mention that communication signal from another terminal cannot be detected when a predetermined period has passed. However Matsuda mentioned that due to movement of the wireless video terminal from the zone 18 A the zone 18B, the wireless terminal can not can not receive a signal which is transmitted by the base station for Video data controlling the zone 18A (col 10 lines 29-67). Therefore Matsuda inherently teaches that requested communication from other terminals cannot be detected if the predetermined time is passed.

Regarding **Claims 12, 24**, Matsuda teaches a transmission apparatus further comprising output stop means for stopping output of the original information such as audio, when the ID which is permitted to have communication cannot be confirmed in the reception mode (col 13 lines 57-67, col 14 lines 1-29) .

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takano et al. (US Patent 5,761,437) disclose audio signal processing circuit and video/audio decoder

Robbins (US Patent 5,038,402) disclose apparatus and method for providing digital audio in the FM broadcast Band

Hylton et al. (US Patent 5,793,413) disclose wireless video distribution

Voit et al. (US Patent Number 5,751,707) disclose AIN Interaction through wireless digital video network

7. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications indented for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label

“PROPOSED” or “DRAFT”)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Va., sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Edward F. Urban can be reached (703)305-4385.

NM

June 28, 2002


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600